Run12 det. & target placement

polar. mtg.
26.10.11

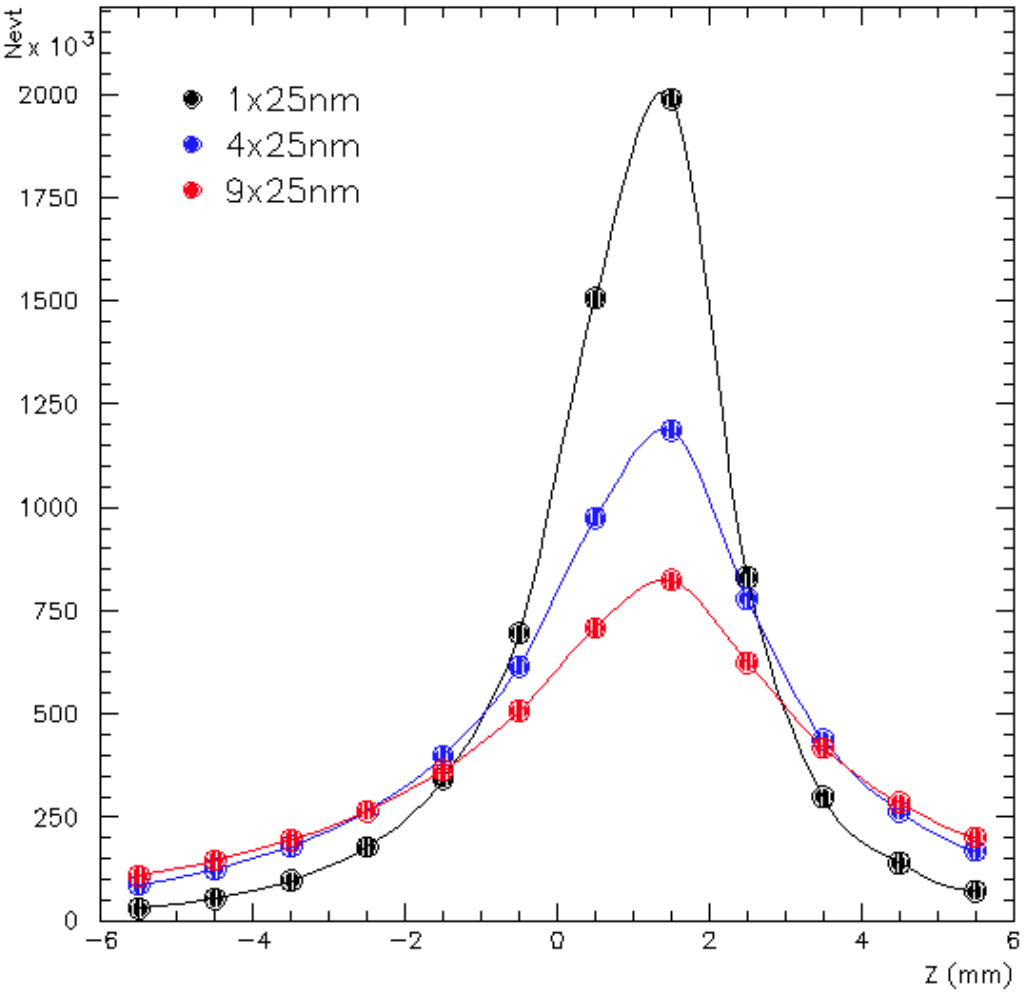
- From last week:
  event distribution, 1mm BNL det. longitudinally segmented
- Agreed (so far) detector assignments
- Proposed detector placements: Anatoli, Bill
- Extra: Wiener WFD samples blow-up

1 mm BNL det. long. segmented

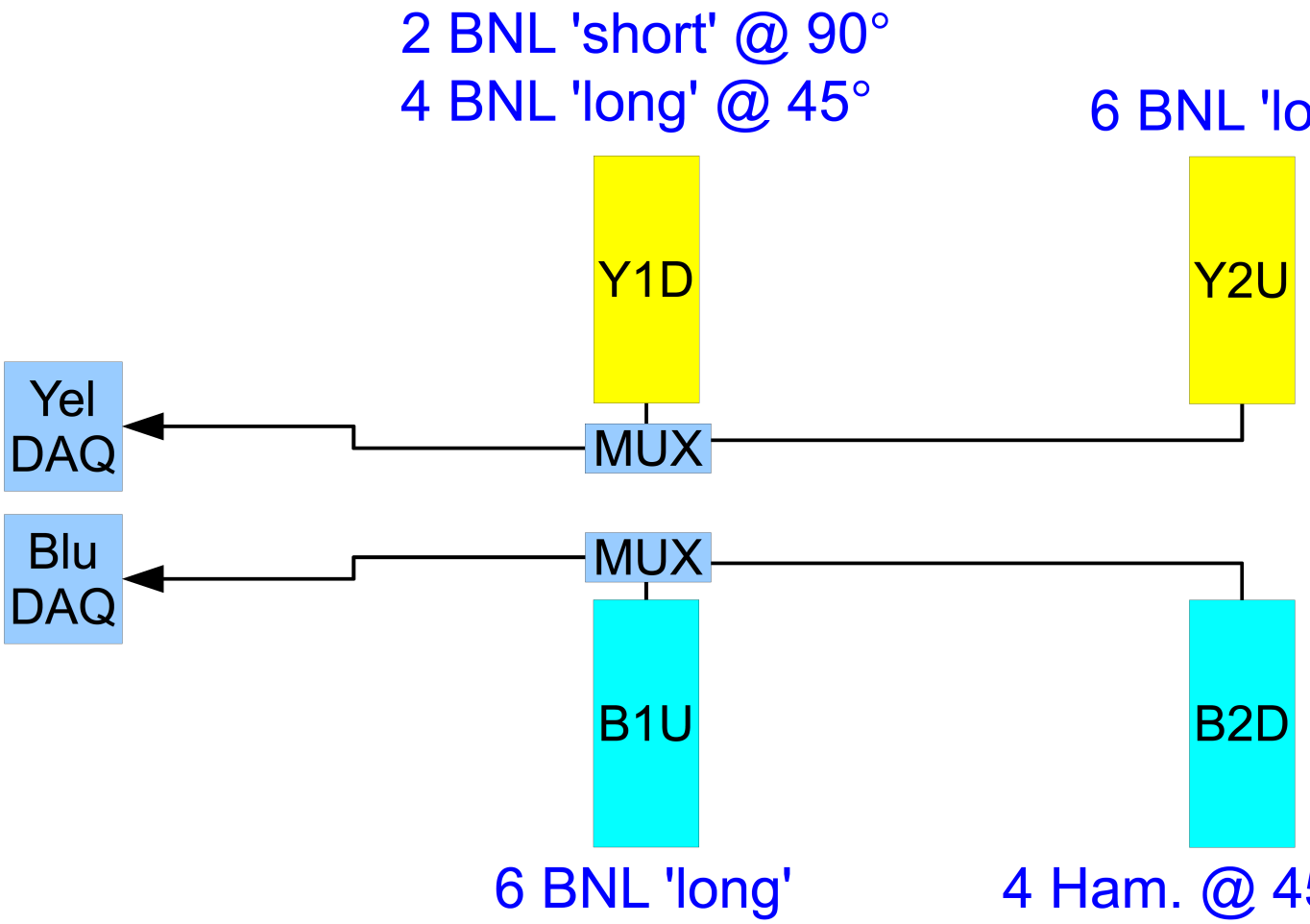
- 1 mm longitudinal segmentation, 18 cm from target; Z=0 ⊥ target
- Simulate E-loss, mult. scattering
- Max. path through target:
  1×, 4×, 9× 25 nm, i.e. nominal target @ 90°, 15°, 6° w.r.t. beam
- Count events E-det>0.2 MeV:

- Last week showed rates OK for BNL 2 mm det.; 1 mm smaller, rates lower, OK

- 12×1 mm segmentation seems able to see maximum width
- Alignment along Z important



Decided: DAQ & detectors

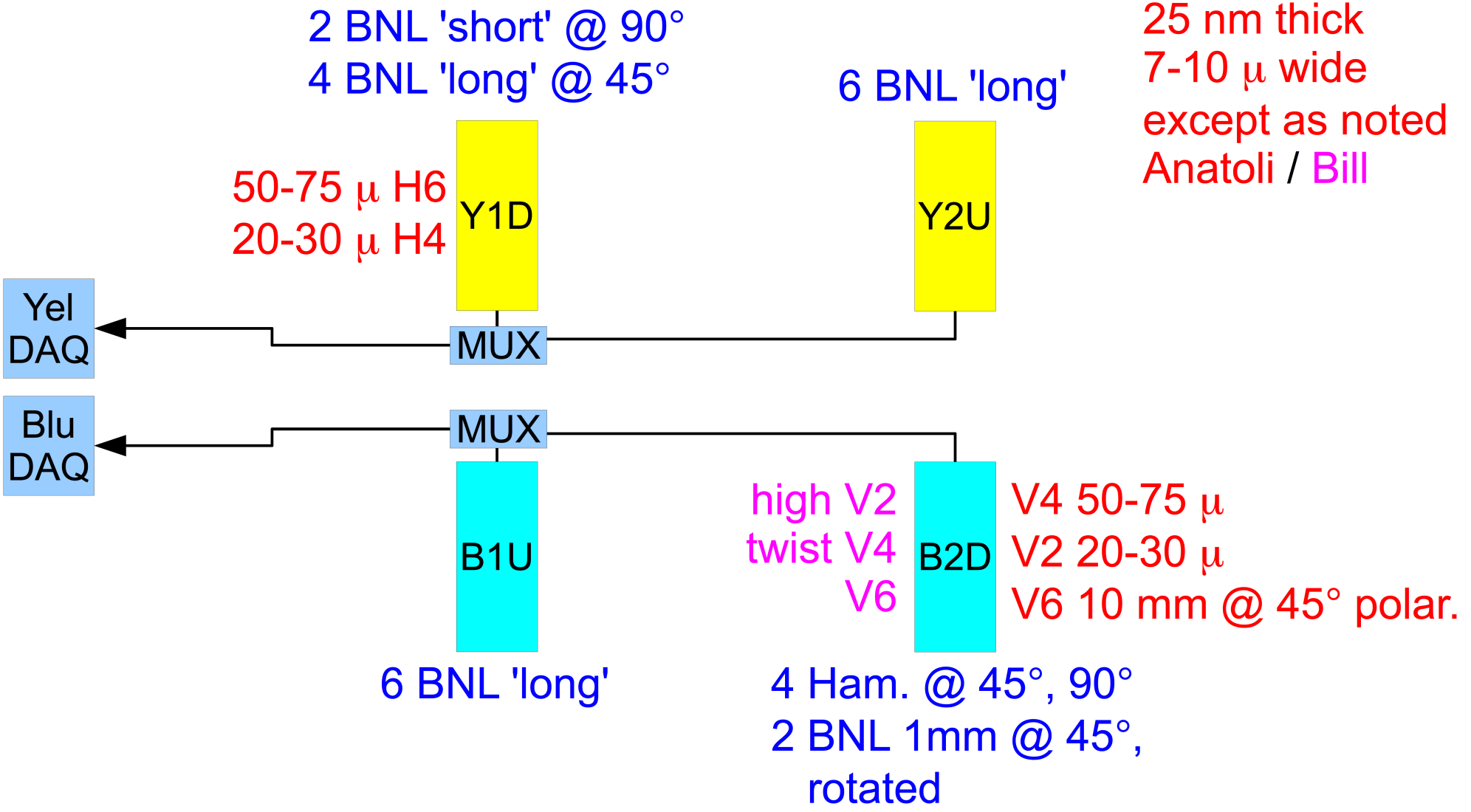


Only changes from Run11:

- Swap: 1 pair Ham. Y1D→B2D @ 45°
  ⇔ 1 pair BNL 'short' B2D→Y1D @ 90°
- New pair 1mm BNL →B2D @ 45°; install rotated
- Discard one pair BNL 'short' (1 hi I_{bias}) from B2D

Proposal: targets

all standard type
25 nm thick
7-10 μ wide
except as noted
Anatoli / Bill



- 20-30, 50-75 μ wide intended for rate studies
- 10 mm wide can maintain 45° polar orientation, well defined E-loss

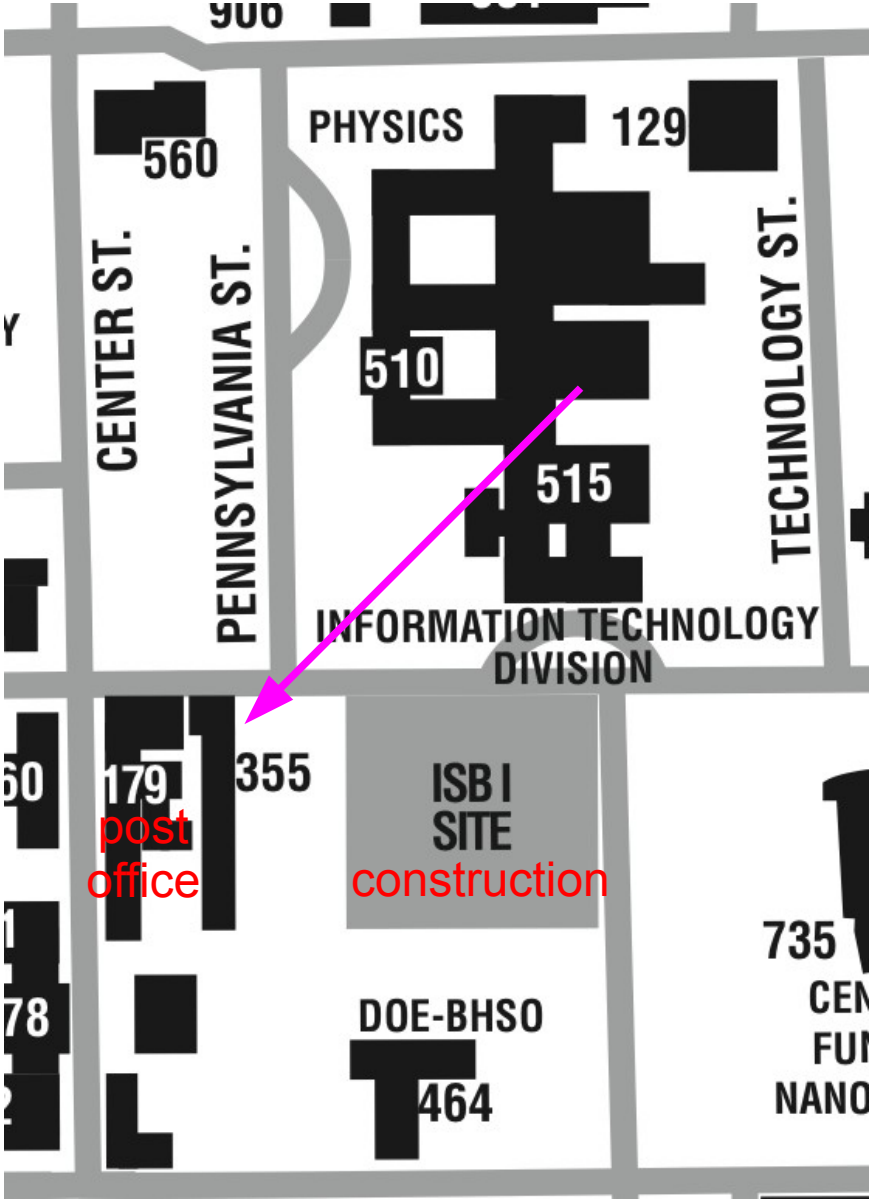
Targets: discussion

My comments:

- Do we need both 20-30 μ and 50-75 μ wide for rate studies?
  Can vary bunch current in APEX session; suggest drop 20-30 μ
- Is there experience with 10 mm wide targets?
- In B2D I would put 'rate test' targets in horizontally;
  not used for normal polarization measurements;
  poorer polar. measurement for H targets, no 90° detectors
  Because:
- The 'high twist' targets in B2D are to get a lot of polar. measurements
  (if they survive):
  - compare to standard targets in same V ladder
  - for both standard and 'high twist' targets:
    perhaps see A_N dependence on Z-distribution mean, RMS

We're moving!

- Today our last meeting here
- We go to Bldg. 355: between post office & construction site
- There is a meeting room there; maybe not ready next week, will resume meetings as soon as available



Extras

Wiener WFD samples

- Is noise ~alternating samples?
- Would be good to see a blow up plot...